

Technical Training Competency 2.1

Competency 2.1 Technical training personnel shall demonstrate a working level knowledge of the requirements of DOE Order 5480.20 (or its associated rule) to determine if a contractor at a facility is meeting the intent of the Order.

1. Supporting Knowledge and/or Skills

- a. Describe the purpose, applicability, and roles and responsibilities sections as they appear in the Order.
- b. Using DOE Order 5480.20 as a reference, describe the general requirements placed upon a management and operating contractor at Category 1, 2, and 3 facilities in the following areas:
 - Qualification and certification of facility personnel
 - Training and qualification of sub-contractors
 - General employee training and unescorted access requirements
 - Continuing training and requalification
 - Exceptions and alternatives to requirements of the Order
 - Personnel selection
 - Training and qualification record requirements
- c. Using DOE Order 5480.20 as a reference, state the entry level requirements for various facility positions.

2. Self-Study Activities (corresponding to the intent of the above competency)

Below are two web sites containing many of the references you may need.

Web Sites		
Organization	Site Location	Notes
Department of Energy	http://wastenot.inel.gov/cted/stdguido.html	DOE Standards, Guides, and Orders
U.S. House of Representatives	http://law.house.gov/cfr.htm	Searchable Code of Federal Regulations

Read DOE Order 5480.20A, *Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities*.

EXERCISE 2.1-A What is the purpose of DOE Order 5480.20A?

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- EXERCISE 2.1-B Explain the applicability as stated in DOE Order 5480.20A.
- EXERCISE 2.1-C Summarize the responsibilities of the Operations Office manager with regard to DOE Order 5480.20A.
- EXERCISE 2.1-D Describe the general requirements for personnel selection with regard to DOE Order 5480.20A.
- EXERCISE 2.1-E Using DOE Order 5480.20A, identify the entry-level requirements for the following positions:
- Category A reactor personnel:
- Training manager
 - Reactor operator

3. Summary

This Order delineates requirements for M&O contractors' training programs at DOE nuclear facilities. The Order also completes the requirement for the Department to review and revise DOE Order 5480.20A under the Department's Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 93-3.

DOE's objectives are to ensure the development and implementation of contractor-administered training programs that provide consistent and effective training for personnel at DOE nuclear facilities. This Order contains minimum requirements that must be included in training and qualification programs. The requirements are based on DOE, Nuclear Regulatory Commission, and related industry standards, and are applicable to all operable DOE nuclear facilities. Because the operation of DOE reactor and nonreactor nuclear facilities involves certain risks to employees, the public, and the environment, well-trained and qualified operating organization personnel are of extreme importance. A vital element in ensuring a well-trained and qualified work force is the implementation of a systematic approach to training (SAT). This approach has proven effective in the commercial nuclear power industry and in other major industries; therefore, the Department requires that training programs for personnel in the operating organizations at DOE nuclear facilities be established using SAT. Experience has also shown that better operating nuclear facilities have well-defined, effectively administered policies and procedures to control the activities associated with personnel training. This Order requires the establishment and implementation of certain training-related procedures.

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4. Exercise Solutions

EXERCISE 2.1-A What is the purpose of DOE Order 5480.20A?

ANSWER 2.1-A The purpose of DOE Order 5480.20A is as follows: “To establish selection, qualification, and training requirements for management and operating (M&O) contractor personnel involved in the operation, maintenance, and technical support of Department of Energy-owned (DOE-owned) Category A and B reactors and non-reactor nuclear facilities.”

EXERCISE 2.1-B Explain the applicability as stated in DOE Order 5480.20A.

ANSWER 2.1-B DOE Order 5480.20A states applicability as follows:

- DOE Elements. This Order is applicable to all Departmental Elements which are responsible for operable DOE-owned Category A and B reactors and non-reactor facilities. The Director, Naval Nuclear Propulsion Program, is exempt from this Order.
- Contractors. Attachment 1 sets requirements that are to be applied to the universe of contractors awarded DOE management and operating contracts involving operable DOE-owned Category A and B reactors and non-reactor nuclear facilities.

EXERCISE 2.1-C Summarize the responsibilities of the Operations Office Manager with regard to DOE Order 5480.20A.

ANSWER 2.1-C The Operations Office manager or designee shall do the following:

- Identify and submit resource requests to the cognizant Secretarial Officer to provide for adequate implementation of personnel qualification programs
- Perform periodic systematic evaluations of training and qualification programs using DOE-STD-1070-94 and provide day-to-day oversight of nuclear facility personnel training and qualification activities
- Review and approve each Training Implementation Matrix for nuclear facilities
- Ensure that Operations Office staffing includes an adequate number of persons having expertise in the area of personnel training

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- Ensure that DOE contractors implement the Order's requirements, if applicable
- Review the certification and recertification of shift supervisors, senior reactor operators, reactor operators, and fissionable material handlers at Category A reactors and high-hazard nonreactor nuclear facilities
- Approve contractor procedures established to grant exceptions to specific training or qualification requirements for an individual
- Approve, on a case-by-case basis, contractor requests for certification extensions
- Approve contractor assessments of the need for simulators at Category A test and research reactors

EXERCISE 2.1-D Describe the general requirements for personnel selection with regard to DOE Order 5480.20A.

ANSWER 2.1-D The operating contractor establishes a process for selection and assignment of personnel into the operating organization. Factors to consider include background, experience, education, and the ability of the person to meet job performance requirements. Selection of operating organization personnel may involve a selection test. Individuals who do not meet the experience requirements for a position may be assigned to that position if the overall operating organization is considered balanced and strong. DOE approval is obtained on a case-by-case basis.

EXERCISE 2.1-E Using DOE Order 5480.20A, identify the entry-level requirements for the following positions:

Category A reactor personnel:

- Training manager
- Reactor operator

ANSWER 2.1-E Training Manager

Education: Baccalaureate including courses in education and technical subjects

Experience: Four years of job-related experience, which shall include 2 years nuclear experience

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Special Requirements:

The training manager shall have training in educational techniques if not included in baccalaureate course material.

If the training manager does not hold, or has not held, a senior reactor operator certification, another person who holds a senior reactor operator certification shall be responsible to the training manager for the content and conduct of the certified operator training program.

Reactor Operators

Education: High school diploma

Experience:

Nuclear: Three years

Special Requirements:

Two years of the required nuclear experience may be power plant experience; six months of the required experience shall be as a qualified auxiliary operator at the reactor for which certification is sought.